

claims for
9/913898

AMENDMENTS**Listing of Claims:**

The following listing of claims replaces all previous listings or versions thereof:

1-7 (Canceled)

8. (Currently amended) A transgenic fish comprising a chimeric gene comprising a promoter that drives the expression of a structural gene predominantly in muscles of said fish, said promoter being ~~a muscle-creatine-kinase gene promoter, or a fast skeletal muscle isoform of myosin light chain 2 gene promoter~~ which includes the sequence of SEQ ID NO:22, wherein the transgenic fish contains said promoter in germ cells and/or in somatic cells and which is capable of breeding with either a said transgenic fish or a non-transgenic fish to produce viable and fertile transgenic progeny.

9. (Canceled)

10. (Currently amended) The transgenic fish of claim 8, further comprising a fluorescent protein gene under control of said promoter.

11. (Currently amended) The transgenic fish of claim 10, wherein said fluorescent protein is expressed ~~a level~~ at a level sufficient that said fish fluoresces upon exposure to sunlight.

12. - 18. (Canceled)

19. (Previously Presented) The transgenic fish of claim 10, further defined as an ornamental fish for the ornamental fish market, which contains said promoter in germ cells and/or in somatic cells and which is capable of breeding with either a said transgenic fish or a non-transgenic fish to produce viable and fertile transgenic progeny.

20. (Previously Presented) The transgenic fish of claim 10, wherein said fish and progeny of said fish emits green fluorescence when the whole fish is exposed to a blue or ultraviolet light.

21. – 22. (Canceled)

23. (Previously presented) The transgenic fish of claim 10, wherein the fish comprises a zebrafish muscle creatine kinase gene promoter which is capable of directing a structural gene to be specifically expressed in muscles when it is inserted in front of the structural gene and introduced into fish embryos.

24. – 29. (Canceled)

30. (Previously presented) The transgenic fish of claim 10, further defined as a zebrafish.

Listing of Claims

The following listing of claims replaces all previous listings or versions thereof:

1. (Original) A method of providing transgenic fish to the ornamental fish market, comprising the steps of:
 - (a) obtaining an ornamental transgenic fish comprising one or more chimeric fluorescence genes positioned under the control of a promoter, wherein the transgenic fish expresses one or more fluorescent proteins encoded by the one or more fluorescence genes at a level sufficient such that said fish fluoresces upon exposure to one or more of a blue light, ultraviolet light or sunlight; and
 - (b) distributing said fish to the ornamental fish market.
2. (Original) The method of claim 1, further comprising displaying said transgenic fish under a blue or ultraviolet light.
3. (Original) The method of claim 2, wherein the transgenic fish are displayed under an ultraviolet light that emits light at a wavelength selected to be optimal for the fluorescent protein or proteins.
4. (Original) The method of claim 3, wherein the transgenic fish comprise a GFP and are displayed under an ultraviolet light that emits light at 365 nm.
5. (Original) The method of claim 3, wherein the transgenic fish comprise a GFP and are displayed under an ultraviolet light that emits light at 395 nm.
6. (Original) The method of claim 3, wherein the transgenic fish comprise a GFP and are displayed under a blue light that emits light at 488 nm.
7. (Original) The method of claim 1, wherein the transgenic fish express a GFP.

8. (Currently amended) The method of ~~claim 8~~claim 7, wherein the transgenic fish express an EGFP.
9. (Original) The method of claim 1, wherein the transgenic fish express a BFP.
10. (Original) The method of claim 9, wherein the transgenic fish express an EBFP.
11. (Original) The method of claim 1, wherein the transgenic fish express a YFP.
12. (Original) The method of claim 11, wherein the transgenic fish express an EYFP.
13. (Original) The method of claim 1, wherein the transgenic fish express a CFP
14. (Original) The method of claim 13, wherein the transgenic fish express an ECFP.
15. (Original) The method of claim 1, wherein the transgenic fish expresses more than one color of fluorescent protein.
16. (Original) The method of claim 1, wherein the promoter is a tissue specific promoter.
17. (Withdrawn) The method of claim 16, where the promoter is a skin specific promoter.
18. (Withdrawn) The method of claim 17, wherein the promoter is a zebrafish cytokeratin gene promoter.
19. (Withdrawn) The method of claim 16, wherein the promoter is a muscle specific promoter.
20. (Original) The method of claim 19, wherein the promoter is a zebrafish muscle creatine kinase gene promoter.

21. (Original) The method of claim 19, wherein the promoter is a zebrafish myosin light chain 2 gene promoter.
22. (Withdrawn) The method of claim 16, wherein the promoter is an eye specific promoter.
23. (Withdrawn) The method of claim 16, wherein the promoter is a bone specific promoter.
24. (Withdrawn) The method of claim 1, wherein the promoter is a ubiquitously expressing promoter.
25. (Withdrawn) The method of claim 24, wherein the promoter is a zebrafish acidic ribosomal protein gene promoter.
26. (Withdrawn) The method of claim 1, wherein the promoter is an inducible promoter.
27. (Withdrawn) The method of claim 26, wherein the inducible promoter is a hormone inducible promoter.
28. (Withdrawn) The method of claim 26, wherein the inducible promoter is a heavy metal inducible promoter.
29. (Original) The method of claim 16, wherein the transgenic fish expresses more than one fluorescent protein color.
30. (Original) The method of claim 29, wherein the more than one fluorescent protein is expressed in the same tissue, to effect a Original fluorescent color.
31. (Original) The method of claim 30, where the transgenic fish expresses a GFP and a BFP.

32. (Original) The method of claim 29, wherein the more than one fluorescent proteins are separately expressed in different tissues.

33. (Withdrawn) The method of claim 32, wherein the transgenic fish expresses a GFP under the control of an eye specific promoter.

34. (Withdrawn) The method of claim 32, wherein the transgenic fish expresses a BFP under the control of a skin specific promoter.

35. (Original) The method of claim 32, wherein the transgenic fish expresses a YFP under the control of a muscle specific promoter.

36. (Original) The method of claim 1, wherein the transgenic fish is a stable transgenic fish line obtained by a method comprising the steps of:

(a) obtained an ornamental transgenic fish comprising one or more chimeric fluorescence genes positioned under the control of a promoter, wherein the transgenic fish expresses one or more fluorescent proteins encoded by the one or more fluorescence genes at a level sufficient such that said fish fluoresces upon exposure to one or more of a blue light, ultraviolet light or sunlight; and

(b) breeding the ornamental transgenic fish with a second fish to obtain offspring; and

(c) selecting from said offspring a stable transgenic line that expresses one or more fluorescent proteins.

37. (Original) The method of claim 36, wherein the second fish is a wild type fish.

38. (Original) The method of claim 36, wherein the second fish is a second transgenic fish.

39. (Original) The method of claim 1 or 36, wherein the ornamental transgenic fish is a transgenic zebrafish, medaka, goldfish or carp.

40. (Original) The method of claim 36, wherein the second fish is a zebrafish, medaka, goldfish or carp.

41. (Original) The method of claim 1 or 36, wherein the ornamental transgenic fish is a transgenic koi, loach, tilapia, glassfish, catfish, angel fish, discus, eel, tetra, goby, gourami, guppy, Xiphophorus, hatchet fish, Molly fish, or pangasius.